



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,210	02/06/2006	Jonathan Mark Hardy	056258-5106	2342

9629 7590 10/18/2007
MORGAN LEWIS & BOCKIUS LLP
1111 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 20004

EXAMINER

COPPINS, JANET L

ART UNIT	PAPER NUMBER
----------	--------------

1626

MAIL DATE	DELIVERY MODE
-----------	---------------

10/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/539,210

Applicant(s)

HARDY ET AL.

Examiner

Janet L. Coppins

Art Unit

1626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 7-11 and 13 is/are rejected.
- 7) ☒ Claim(s) 4-6, 12 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1 and 4-14 are pending in the instant application.

Response to Amendment

2. The Examiner acknowledges receipt of Applicants' Amendment and Response of March 27, 2007. Applicants have cancelled claims 2, 3 and 15 and have amended claims 1, 4, 5 and 14.

3. In response to Applicants' Request for Clarification of August 9, 2007, the instant Office Action replaces the previous non-final Office Action of June 13, 2007. The Examiner apologizes for any inconvenience and has corrected the record regarding the current pending and rejected claims. Accordingly, the statutory period for response has been reset from the mail date of this communication.

Claim Rejections - 35 USC § 102

4. (a) Claims 1-8, 10, 11, 13, and 14 previously rejected under 35 U.S.C. 102(b) as being anticipated by Hamamoto et al, Chemistry Letters, 1986.

(b) Claims 1, 2, 7, 8, 10, 11, and 13 previously rejected under 35 U.S.C. 102(b) as being anticipated by JP 62-212395.

(c) Claim 14 previously rejected under 35 U.S.C. 102(b) as being anticipated by Wilk et al, Tetrahedron Letters, 2001.

5. In view of Applicants' amendatory changes to the claims, the Examiner withdraws the anticipation rejections of the aforementioned claims.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1626

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1, 7-11 and 13 rejected under 35 U.S.C. 103(a) as being unpatentable over JP62-212395 (herein referred to as "JP '395").

Applicants are claiming the following compounds:

Applicants are claiming a method for the preparation of phosphitylation agents $R^1-Y^1-P(NR^2R^3)_2$, according to the process of claim 1, comprising:

a) reacting a compound of formula PX_3 with a compound of formula HNR^2R^3 to form a compound $X-P(NR^2R^3)_2$

Art Unit: 1626

b) reacting $X-P(NR^2R^3)_2$ with a compound of formula R^1-Y^1-H in the presence of a solvent to form the compound $R^1-Y^1-P(NR^2R^3)_2$

wherein the same solvent is employed in reaction a) and reaction b) and is a hydrocarbon solvent; and R^1 , R^2 , R^3 , Y^1 , X are defined in claim 1.

Determining the scope and content of the prior art

The JP '395 document teaches the preparation of a phosphorous amide compound, $R^3-O-P(NR^2R^3)_2$, which is the same as the instantly claimed process of preparation of instant claim 1.

The JP document teaches the reaction of a trihalophosphine (the same as Applicants' " PX_3 ") with a di-isopropylamine (the same as Applicants' " $HN-R^2R^3$ ") to form a bisaminomonohalogenphosphine (the same as Applicants' " $X-P(NR^2R^3)_2$ ") which is then reacted with an alcohol, R_3-OH (same as Applicants' " R^1-Y^1-H ") in bases such as Et_3N , under anhydrous conditions.

Ascertaining the difference between the prior art and the claims

The difference between the prior art and the claims is that the JP '395 document does not specifically teach a single disclosed process wherein toluene is utilized as the solvent, however the document proposes several times that toluene is a suitable solvent for this reaction.

Resolving the level of ordinary skill in the pertinent art

Minus a showing of unobvious results, it would have been obvious to one of skill in the art to prepare the phosphitylation agents as instantly claimed in claim 1 since the prior art reference discloses a nearly identical process of preparation utilizing the same reactants and reaction conditions. Applicants themselves admit that the JP '395 document teaches a similar process with a "generalized reference to the possibility of using toluene as a solvent" even

Art Unit: 1626

though the only example teaches the use of ether. One would be motivated to prepare the instantly claimed invention since JP '395 has enabled and taught the same reactants and same conditions as recited in steps (a) and (b) of claim 1, with the specific mention of toluene as a suitable solvent in pages 3 and 4 of the translation. The fact that the JP document does not specifically exemplify a process in which toluene is utilized does not affect the issue of obviousness, it merely precludes an anticipation rejection. Therefore, one skilled in the art would know to pick and choose from the various solvents as guided by JP '395 particularly when the same reactants and reaction conditions are taught for preparing the same product, $R^3-O-P(NR^2N^3)_2$. Therefore, absent a showing of unobvious and superior properties, the instant claimed process of preparation would have been suggested to one skilled in the art.

Claim Objections

10. Claims 4-6, 12 and 14 are objected to as being dependent on rejected base claims.

Conclusion

11. In conclusion, claims 1 and 4-14 are pending, claims 1, 7-11 and 13 are rejected, and claims 4-6, 12 and 14 are objected to.

Telephone Inquiry


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janet L. Coppins whose telephone number is 571.272.0680. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph K. McKane can be reached on 571.272.0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1626

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Janet L. Coppins
October 1, 2007



Joseph K. McKane
SPE, Art Unit 1626